
STATE OF SOUTH AUSTRALIA.

**Report on the Manufactories and Works Statistics for the Year
1922-23 and Summary Returns.**

BY

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STATE OF SOUTH AUSTRALIA.

Report of the Government Statist on the Manufactories and Works of the State for the Year 1922-23, and Comparison with Previous Years.

SOUTH AUSTRALIA.—REPORT BY THE GOVERNMENT STATIST ON THE MANUFACTORIES AND WORKS FOR YEAR ENDED JUNE 30TH, 1923.

AN analysis of the main features of the manufacturing industries of the State for the year ended June 30th last, in comparison with the previous year, reveals very satisfactory increases. There are 177 more establishments coming within the statistical classification of a factory, which embraces all factories, workshops, or mills employing four hands or upwards in manufacturing or repairing articles, wholesale or retail, or like establishments employing less than four hands where machinery worked by power is used.

The hands employed were greater by 3,524 (males 2,982, females 542), and the horsepower of machinery actually used on the average during the year increased by 5,081 horsepower. The chief increases in power being electric, 2,603; horsepower and steam, 2,585 horsepower. The salaries and wages paid to the employees increased £629,818, and the grand total value of the output of the works by £3,048,918. The estimated value of plant and machinery, land and buildings, was £1,236,233 greater.

The following summary shows the grand total for the last two years with both one and five years' increases:—

Item.	Year.		Increases.	
	1921-2.	1922-3.	1 Year.	5 Years.
Establishments	No. 1,432	No. 1,609	No. 177	No. 324
Hands employed, including working proprietors	31,171	34,695	3,524	8,061
Power available	H.P. 88,611	H.P. 99,553	H.P. 10,942	H.P. 30,318
Power actually used	62,019	67,100	5,081	18,134
Salaries and wages paid	£ 5,313,927	£ 5,943,745	£ 629,818	£ 2,584,391
Fuel used	798,495	948,455	149,960	265,268
Material used	14,087,930	16,015,552	1,927,622	3,572,749
Gross output	23,854,857	26,903,775	3,048,918	7,642,633
Value of—				
Machinery and plant	4,896,264	5,519,035	622,771	3,129,316
Land and buildings	4,711,022	5,324,484	613,462	1,760,118
Value added to material being production value...	9,766,927	10,888,223	1,121,296	4,060,884
Gross output per inhabitant.	£ s. d. 47 9 3	£ s. d. 52 8 6	£ s. d. 4 19 3	£ s. d. 9 6 5
Salaries and wages per employee	177 15 5	178 16 7	1 1 2	46 17 9

Figures in parentheses in the following remarks will be those of the previous year unless otherwise stated:—

Establishments.—The number working for any portion of the year was 1,609 (1,432). The net increase of 177 is the result of 196 new works less those which closed down or had decreased below the standard for classification as a factory. The industries showing the principal increases in number were—Boots and shoes (repair shops), 25; cycle and motor, 17; upholstery, bedding, &c., 5; joinery and mantelmaking, 9; agricultural implements, 7; engineering and ironworks, &c., 30; butter, 5; bricks, tiles, and lime, 6.

Hands Employed.—The number of hands employed on the average during the year totalled 34,695 (31,171), an increase of 3,524. These include 1,458 (1,278) working proprietors. Industries showing principal increases—Cycle and motors, 1,375; smelting, 382; joinery and sawmills, 228; tailoring, 223; whitework, 44; electric lighting, 191; agricultural implements, 183; engineering, ironworks, &c., 263; printing, bookbinding, and paper bags, boxes, &c., 177; foodstuffs industries, 172.

A few industries record decreases, the more important being railway workshops, 273; slop-clothing, 105; boat building, 194; fertilisers, 56; saddlery and harness, 29.

Distribution of Hands.—The hands employed were classified as follows:—Working proprietors, 1,458 (1,278); managers and overseers, 1,158 (1,076); accountants and clerks, 1,850 (1,688); engine-drivers and firemen, 610 (563); workers, skilled and unskilled, and all others 29,619 (26,566).

Child Labor.—1,920 (1,710) were employed under 16 years of age, an increase of 210.

COMPARATIVE SUMMARY OF ESTABLISHMENTS AND HANDS.

Year.	Establishments.	Hands Employed, including Working Proprietors.			Greatest No. of Hands at One Time.	Working Proprietors.
		Male.	Female.	Total.		
1917-18..	No. 1,285	No. 21,325	No. 5,309	No. 26,634	No. 29,634	No. 1,173
1920-21..	1,438	24,548	5,882	30,430	34,586	1,284
1921-22..	1,432	25,006	6,165	31,171	35,452	1,278
1922-23..	1,609	27,988	6,707	34,695	39,592	1,458
Increase } 5 years }	No. 324	6,663	1,398	8,061	9,958	285
	% 25·21	31·25	26·33	30·27	33·58	24·30

MACHINERY EMPLOYED.

In 1922-23 the industries were equipped with 99,553 (88,611) horsepower, of which only an average of 67,100 (62,019) horsepower, or 67·30 (69·99) per cent., was actually used.

COMPARATIVE SUMMARY OF POWER.

Year.	Total Power Available.	Power Actually Used.				
		Total.	Percentage to that Available.	Chief Kinds.		
				Steam.	Electric.	Gas.
1917-18..	H.P. 69,235	H.P. 48,966	Per cent. 70·7	H.P. 29,126	H.P. 9,787	H.P. 7,870
1920-21..	86,051	57,657	67·0	34,784	10,263	10,019
1921-22..	88,611	62,019	70·0	37,037	12,054	10,163
1922-23..	99,553	67,100	67·3	39,622	14,657	10,128
Increase } 5 years }	H.P. 30,318	18,134	— 3·4	10,496	4,870	2,258
	% 43·79	37·03	— 4·8	36·04	49·76	28·69

CHIEF ITEMS OF EXPENDITURE.

Material Used or Treated.—The cost to the manufacturer of the material used, treated, or worked up was £16,015,552 (£14,087,930), an increase of £1,927,622. The increased activity of the smelting industry was mainly responsible for this increase.

Fuel, Light, &c., Consumed.—£948,455 (£798,495), increase £149,960. The quantities of fuel advised as used were—Coal, 306,300 (259,479) tons; coke, 87,433 (67,242) tons; wood, 67,157 (55,385) tons.

Salaries and Wages.—Excluding the sums drawn by working proprietors, the amount received by the hands during the year was £5,943,745 (£5,313,927), increase £629,818. Males received £5,392,340 (£4,827,612) and females, £551,405 (£486,315), averaging per hand, males, £202 17s.; females, £82 17s. 4d.; persons, £178 16s. 7d. (£177 15s. 5d.).

COMPARATIVE SUMMARY OF EARNINGS OF EMPLOYEES.

Year.	Salaries and Wages.		Males.		Females.	
	Total.	Per Employee.	Total.	Per Employee.	Total.	Per Employee.
	£	£ s. d.	£	£ s. d.	£	£ s. d.
1917-18	3,359,354	131 18 10	3,087,063	152 17 10	272,291	51 13 4
1920-21	4,866,211	166 19 2	4,430,269	190 1 0	435,942	74 14 3
1921-22	5,313,927	177 15 5	4,827,612	203 0 5	486,315	79 10 10
1922-23	5,943,745	178 16 7	5,392,340	202 17 0	551,405	82 17 4
Increase five years	£2,584,391 % 76.93	46 17 9 35.54	2,305,277 74.68	49 19 2 32.68	279,114 102.48	31 4 0 60.37

TOTAL VALUE OF OUTPUT.

The wholesale selling value at the works of the year's output of factories and works was £26,903,775 (£23,854,857), increase £3,048,918. This is mainly due to the smelting works, though an increased quantity output in many other classes of industry has also contributed substantially, as will be seen from the paragraph dealing with quantity production.

Industries showing large increases:—Smelting, £4,185,111, increase £1,679,411; cycle and motors, £1,390,686, increase £565,158; bricks and tiles, £327,320, increase £76,276; chaff mills, £570,152, increase £107,914; sawmills (town), £1,341,119, increase £205,949; electric light, gas, &c., £1,074,095 (£942,416), increase £131,679; agricultural implements, £474,424, increase £61,697; butter and cheese, £924,329, increase £159,109; breweries, distilleries, and malting, £838,276, increase £22,619; aerated waters, cordials, &c., £268,353, increase £24,802; boots and shoes, £392,723, increase, £21,767; tailoring, £553,071, increase £33,852; brushware, £114,680, increase £28,292.

Falling market values reduced the output value of flour mills from £1,951,624 to £1,688,444, decrease £263,180, though the quantity output was slightly greater.

Decreases are also noted in the output of £31,262 in tanneries, £31,319 in boxmaking, £76,866 in engineering, £32,597 in slop clothing, £59,610 in shirtmaking and general whitework, and £119,679 in chemical fertilisers.

PRODUCTION VALUE.

The total selling value of output covered by the foregoing paragraph does not represent the production value of the State's manufacturing industries. This is the value which is added to the material by the process of manufacture or treatment, and is computed to be £10,843,519 (£9,607,286), increase £1,236,233. This is equal to £21 4s. 4d. (£19 8s. 8d.) per inhabitant.

COMPARATIVE SUMMARY OF OUTPUT AND ADDED VALUE.

Year.	Material Used.	Value added to Material by Treatment.		Gross Output.	
		Total.	Per Inhabitant.	Total.	Per Inhabitant.
	£	£	£ s. d.	£	£ s. d.
1917-18 ...	12,442,803	6,818,339	15 5 2	19,261,142	43 2 1
1920-21 ...	14,375,430	7,982,679	16 5 1	22,358,109	45 10 5
1921-22 ...	14,087,930	9,766,927	19 8 8	23,854,857	47 9 3
1922-23 ...	16,015,552	10,888,223	21 4 4	26,903,775	52 8 6
Increase 5 years } % 28.71	£3,572,749 59.69	4,069,884 39.05	5 19 2 39.05	7,642,633 39.68	9 6 5 21.62

DISTRIBUTION OF GROSS OUTPUT VALUE.

The margin between the total expenditure on material, fuel, light, etc., used, salaries and wages paid, and the selling value of the output accrues to the manufacturer to cover all overhead charges and profits. For every £100 of output this margin was £14 17s. 1d. (£15 6s. 5d.), a decrease of 9s. 4d. The distribution of each £100 is as follows:—Salaries and wages, £22 1s. 10d. (£22 5s. 6d.); fuel,

light, &c., £3 10s. 6d. (£3 6s. 11d.); material used, £59 10s. 7d. (£59 1s. 2d.); margin for all other expenses and profit, £14 17s. 1d. (£15 6s. 5d.). Total, £100.

COMPARATIVE SUMMARY OF DISTRIBUTION OF EACH £100 OF OUTPUT VALUE.

Year.	Salaries and Wages.	Fuel, Light, &c.	Material Used.	Margin for other Expenses and Profit.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£
1917-18	17 8 10	3 11 0	64 12 0	14 8 2	100
1920-21	21 15 6	3 3 0	64 5 11	10 15 9	100
1921-22	22 5 6	3 6 11	59 1 2	15 6 5	100
1922-23	22 1 10	3 10 6	59 10 7	14 17 1	100
Increase 5 years } % 26.66	£4 13 0 — 0 0 6	— 0 0 6 — 0 8 5	— 5 1 5 — 7 8 5	0 8 11 3 0 5	—

QUANTITY PRODUCTION.

The following are the quantities produced in some of the Chief industries:—

Item.	Unit of Quantity.	Year 1917-18.	Year 1921-22.	Year 1922-23.
Leather	Lb.	2,067,111	1,583,487	1,653,181
Soap	Cwt.	87,751	88,686	97,411
Candles	Lb.	1,680,606	1,134,514	1,353,189
Bricks	Number	28,173,296	60,756,794	80,502,365
Lime	Ton	8,509	19,012	22,975
Butter	Lb.	6,916,202	10,658,132	10,927,220
Pickles, sauces	Pint	1,308,822	2,499,618	2,680,501
Aerated waters	Doz.	1,303,586	1,669,027	1,827,872
Spirits—Brandy ...	Pf. gall.	108,372	134,007	271,231
All other	Pf. gall.	403,266	637,147	729,658
Flour	Ton	135,882	108,893	109,761
Bran and pollard ..	Ton	60,922	46,208	49,745
Biscuits	Lb.	2,831,099	2,844,000	3,144,200
Boots and shoes ...	Pair	633,589	547,476	576,655
Gas	1,000 cub. ft. ...	713,405	929,907	1,032,565
Electric light & power	1,000 Brit. unit	23,603	28,755	39,905

LAND AND BUILDINGS, PLANT, AND MACHINERY.

The estimated value of the land and the premises used for manufacturing (including the capitalisation of rent paid for premises) and the value of plant and machinery is £10,843,519 (£9,607,286) an increase of £1,236,233.

Year.	Machinery and Plant.	Land and Buildings.	Total.
	£	£	£
1917-18	3,389,719	3,564,366	6,954,085
1920-21	4,473,247	4,495,667	8,968,914
1921-22	4,896,264	4,711,022	9,607,286
1922-23	5,519,035	5,324,484	10,843,519
Increase 5 years } % 62.82	£2,129,316 49.37	1,760,118 55.93	3,889,434

W. L. JOHNSTON, Government Statist
Statistical Office, Adelaide, February 28th, 1924.

STATE OF SOUTH AUSTRALIA.—MANUFACTORIES AND WORKS, 1922-23.

No. 1.—Return showing the number of Establishments, Hands Employed, Power Used, and Value of Premises, &c., for the Years 1921-22 and 1922-23.

Class of Industry.	Number of Establishments.		Number of Hands Employed, including Working Proprietors.		Horse Power of Machinery.				Value of Plant, Machinery, Factory Premises, and Land.	
	Total.				Full Capacity.		Average Actually Used.			
	1921-22.	1922-23.	1921-22.	1922-23.	1921-22.	1922-23.	1921-22.	1922-23.	1921-22.	1922-23.
	No.	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	£	£
I. Treating raw material.....	100	106	968	1,054	2,974	3,133	2,134	2,269	201,841	254,974
II. Oils, fats, &c.	10	10	213	242	254	502	220	341	77,898	183,417
III. Stone, clay, glass, &c.....	98	106	1,876	2,048	6,078	6,550	4,052	4,669	746,149	839,188
IV. Working in wood.....	91	103	1,474	1,699	3,143	3,416	2,510	2,699	346,693	385,273
V. Metal works, machinery, &c., Government and tramway workshops	188	231	8,210	9,010	25,192	25,953	9,455	11,094	1,845,923	2,056,990
VI. Foods, drinks, &c.	242	256	3,996	4,168	13,572	13,853	9,251	9,943	2,025,050	2,165,000
VII. Clothing, textile fabrics, &c.	268	310	5,506	5,928	1,358	1,493	1,055	1,150	667,900	840,452
VIII. Books, paper, printing, &c.	89	93	2,048	2,256	1,468	1,652	1,191	1,356	645,650	697,145
IX. Musical instruments	3	9	†44	†70	†25	†21	†20	†19	†12,856	†31,488
X. Arms and explosives	2	1	*	*	*	*	*	*	*	*
XI. Vehicles, saddlery, harness, &c.....	160	179	2,375	3,713	1,441	1,557	1,073	1,186	517,564	675,892
XII. Ship and boat building and repairing	10	10	521	338	916	932	546	545	122,277	125,980
XIII. Furniture, bedding, &c.	68	84	1,019	1,157	1,334	1,398	1,143	1,198	164,584	184,470
XIV. Drugs, chemicals, &c.	18	18	916	884	3,223	3,434	2,709	2,925	557,241	611,682
XV. Surgical and other scientific instruments	6	7	47	46	16	23	14	21	18,009	21,764
XVI. Timepieces, jewellery, and platedware.....	21	27	219	235	94	101	87	100	45,805	56,658
XVII. Heat, light, and energy	32	30	1,292	1,481	27,135	35,410	26,288	27,469	1,526,615	1,625,524
XVIII. Leatherware (N.E.I.)	4	5	92	92	3	3	3	3	8,435	9,690
XIX. Minor wares (N.E.I.)	22	24	355	274	385	122	268	113	76,796	77,932
Grand Total	1,432	1,609	31,171	34,695	88,611	99,553	62,019	67,100	9,607,286	10,843,519
Increase	—	177	—	3,524	—	10,942	—	5,081	—	1,236,233

No. 2.—Return showing Salaries and Wages Paid, Value of Fuel, Etc., and Material Used, Gross Output, and Value added to Materials by Process of Manufacture for the Years 1921-22 and 1922-23.

Class of Industry.	Salaries and Wages Paid.		Value of Fuel and Light Consumed.		Value of Material Used.		Gross Value of Output.		Value added to Material by Process of Manufacture.	
	1921-22.	1922-23.	1921-22.	1922-23.	1921-22.	1922-23.	1921-22.	1922-23.	1921-22.	1922-23.
	£	£	£	£	£	£	£	£	£	£
I. Treating raw material, &c.	155,654	174,421	20,053	22,722	714,549	856,556	1,008,045	1,174,575	293,496	318,019
II. Oils, fats, &c.	40,248	43,752	5,024	4,044	187,349	182,130	296,621	294,987	109,272	112,857
III. Stone, clay, glass, &c.	376,808	407,824	138,478	158,843	298,434	295,586	1,047,150	1,137,010	748,716	841,424
IV. Working in wood..	281,934	327,236	7,995	8,933	1,034,805	1,287,808	1,540,623	1,783,410	505,758	495,602
V. Metal works, machinery, &c.	1,659,805	1,854,274	243,969	317,155	3,233,789	4,704,515	5,823,873	7,755,213	2,590,084	3,050,698
VI. Food, drinks, &c...	651,090	697,699	133,681	138,899	5,093,712	5,038,471	6,860,550	6,857,218	1,766,838	1,818,747
VII. Clothing, textile fabrics, &c.	574,998	641,384	16,412	18,436	1,113,081	1,029,108	2,031,746	2,033,517	918,665	1,004,409
VIII. Books, paper, printing, &c.	339,949	378,918	11,597	13,108	550,127	490,412	1,109,844	1,115,761	559,717	625,349
IX. Musical instruments, &c.	†5,480	†10,268	†154	†146	†6,217	†6,394	†15,414	†30,259	†9,197	†23,865
X. Arms and explosives	*	*	*	*	*	*	*	*	*	*
XI. Vehicles, saddlery, ..	382,938	546,626	11,979	18,114	557,779	863,458	1,191,125	1,748,315	633,346	884,857
XII. Ship and boat building and repairs, &c.	134,314	90,156	7,793	5,467	157,930	93,242	322,158	205,863	164,228	112,621
XIII. Furniture, bedding	162,566	179,610	4,461	5,223	197,255	211,794	430,288	491,913	233,033	280,119
XIV. Drugs, chemicals, &c.	164,898	157,873	25,738	30,058	613,039	573,543	941,671	862,900	328,632	289,357
XV. Surgical and other scientific instruments	6,898	8,232	286	320	8,278	6,231	24,583	27,233	16,305	21,002
XVI. Timepieces, jewellery, platedware	30,483	33,794	1,780	1,781	29,003	36,353	77,187	96,032	48,184	59,679
XVII. Heat, light, energy	286,059	338,826	167,594	204,268	188,333	209,254	942,416	1,074,095	754,083	864,841
XVIII. Leatherware (N.E.I.)	9,993	12,746	238	226	23,341	27,256	40,946	47,980	17,605	20,724
XIX. Minor wares (N.E.I.)	49,812	40,106	1,263	712	80,849	103,441	150,617	167,494	69,768	64,053
Grand total	5,313,927	5,943,745	798,495	948,455	14,087,930	16,015,552	23,854,857	26,903,775	9,766,927	10,888,223
Increase	—	629,818	—	149,960	—	1,927,622	—	3,048,918	—	1,121,296

* There being less than three factories in this class all details are included in Class IX.

† Including Class X.

No. 3 — *Return showing particulars of Manufactures and Works in the State of South Australia for the Years 1917-18 to 1922-23, and Comparisons of the Year 1922-23 with 1921-22 and with 1917-18.*

Particulars.	Unit of Quantity.	Years.						Increase or Decrease, 1922-23. (One and five years).	
		1917-18.	1918-19.	1919-20.	1920-21.	1921-22.	1922-23.	Over 1921-22.	Over 1917-18.
Number of establishments	No.	1,285	1,313	1,368	1,438	1,432	1,609	+	177
Number using machinery	"	1,019	1,042	1,093	1,137	1,132	1,308	+	176
Hands employed (including working proprietors)—									
Males	"	21,325	22,372	23,434	24,548	25,006	27,988	+	2,982
Females	"	5,309	5,543	6,008	5,882	6,165	6,707	+	542
Total	"	26,634	27,915	29,442	30,430	31,171	34,695	+	3,524
Proportion <i>per cent.</i> of each sex employed—									
Males	%	80.07	80.14	79.59	80.67	80.22	80.67	+	0.45
Females	"	19.93	19.86	20.41	19.33	19.78	19.33	—	0.45
Total power employed—									
Full capacity	H.P.	69,235	73,873	77,823	86,051	88,611	99,553	+	10,942
Average actually used	"	48,966	50,775	52,644	57,657	62,019	67,100	+	5,081
Proportion used to total available	%	70.72	68.73	67.65	67.00	69.99	67.30	—	2.69
Kinds of power actually used—									
Steam	H.P.	29,126	29,241	29,120	34,784	37,037	39,622	+	2,585
Gas	"	7,870	8,169	9,019	10,019	10,163	10,128	—	35
Electric	"	9,787	11,034	11,849	10,263	12,054	14,657	+	2,603
Oil	"	1,954	2,094	2,400	2,368	2,567	2,690	+	123
Other	"	229	237	256	223	198	3	—	195
Salaries and wages paid	£	3,359,354	3,651,715	3,988,062	4,866,211	5,313,927	5,943,745	+	629,818
Value fuel and light used	"	683,187	644,687	558,802	704,775	798,495	948,455	+	149,960
Value material used	"	12,442,803	13,759,882	12,970,957	14,375,430	14,087,930	16,015,552	+	1,927,622
Margin for miscellaneous expenses and profit	"	2,775,798	2,754,346	2,936,718	2,411,693	3,654,505	3,996,023	+	341,518
Gross value of output	"	19,261,142	20,810,630	20,454,539	22,358,109	23,854,857	26,903,775	+	3,048,918
Output value per inhabitant	"	£43 2 1	£45 9 5	£42 9 5	£45 10 3	£47 9 3	£52 8 6	+	£4 19 3
Proportion <i>per cent.</i> to gross value of output of—									
Salaries and wages paid	%	17.44	17.55	19.50	21.76	22.27	22.09	—	0.18
Fuel, &c., used	"	3.55	3.10	2.73	3.15	3.35	3.53	+	0.18
Material used	"	64.60	66.12	63.41	64.30	59.06	59.53	+	0.47
Margin for miscellaneous expenses and profit	"	14.41	13.23	14.36	10.79	15.32	14.85	—	0.47
		100.00	100.00	100.00	100.00	100.00	100.00	—	—
Average time worked per employee	Months	11.66	11.65	11.56	11.55	11.65	11.68	+	0.03
Average annual earnings per employee (excluding working proprietors)—									
All hands	£	131 18 10	136 12 10	141 12 6	166 19 2	177 15 5	178 16 7	+	1 1 2
Male	"	152 17 10	157 11 0	162 8 8	190 1 0	203 0 5	202 17 0	—	0 3 5
Female	"	51 13 4	55 17 6	64 4 0	74 14 3	79 10 10	82 17 4	+	3 6 6
Value machinery and plant	"	3,389,719	3,551,386	3,931,562	4,473,247	4,896,264	5,519,035	+	622,771
Value land and buildings	"	3,564,366	3,672,831	3,977,099	4,495,667	4,711,022	5,324,484	+	613,462
Total	"	6,954,085	7,224,217	7,908,661	8,968,914	9,607,286	10,843,519	+	1,236,233
Value of production, being value added to material by process of manufacture	"	6,818,339	7,050,748	7,483,582	7,982,679	9,766,927	10,888,223	+	1,121,296
Ditto per head of mean population	"	15 5 2	15 8 1	15 10 9	16 5 1	19 8 8	21 4 4	+	1 15 8